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L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 15322-33-5 REGISTRY

ED Entered STN: 16 Nov 1984

CN Zinc, [L-glutamato(2)- κ N, κ O1, κ O5]- (9CI) (CA INDEX
NAME)

OTHER CA INDEX NAMES:

CN Glutamic acid, zinc deriv. (6CI)

CN L-Glutamic acid, zinc complex

CN Zinc, (L-glutamato)- (7CI, 8CI)

CN Zinc, [L-glutamato(2)-N,O1,O5]-

OTHER NAMES:

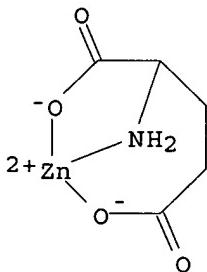
CN Zinc glutamate (1:1)

DR 93460-04-9

MF C5 H7 N O4 Zn

CI CCS, COM

LC STN Files: CA, CAOLD, CAPLUS, TOXCENTER, USPAT2, USPATFULL



14 REFERENCES IN FILE CA (1907 TO DATE)

14 REFERENCES IN FILE CAPLUS (1907 TO DATE)

3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=>

<http://www.cas.org/infopolicy.html>

=> s 15322-33-5

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L5 14 L4

=> s 15 and py<2002

21804355 PY<2002

L6 10 L5 AND PY<2002

=> d 1-10 ibib abs hitstr

L6 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:308987 CAPLUS

DOCUMENT NUMBER: 138:142307

TITLE: Study on the best conditions for preparation of zinc glutamate

AUTHOR(S): Li, Shangde; Li, Yi; Mo, Lier; Cheng, Hefeng; Guan, Xiongtai; Dongye, Guangzhi

CORPORATE SOURCE: Guangdong Medical College, Zhanjiang, 524023, Peop. Rep. China

SOURCE: Guangdong Weiliang Yuansu Kexue (2001), 8(12), 54-57

CODEN: GWYKF3; ISSN: 1006-446X

PUBLISHER: Guangdong Weiliang Yuansu Kexue Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Zinc glutamate was synthesized from Na glutamate and ZnO, and characterized by elemental anal., molar conductivity and IR. The yield was 86% under the optimum synthetic conditions: molar ratio of Na glutamate to ZnO 1.2:1, reaction time 5 h, reaction temperature 90°C and crystallization time 7 h.

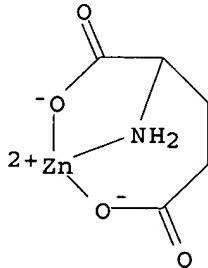
IT 15322-33-5P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(best conditions for preparation of zinc glutamate)

RN 15322-33-5 CAPLUS

CN Zinc, [L-glutamato(2-) -κN, κO1, κO5]- (9CI) (CA INDEX NAME)



L6 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:581169 CAPLUS

DOCUMENT NUMBER: 127:242377

TITLE: Synthesis and properties of amino acid zinc salt

AUTHOR(S): Zhang, Youming; Bai, Junfeng; Lu, Manqing; Lu, Airu

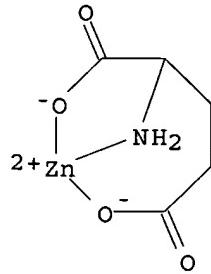
CORPORATE SOURCE: Institute of Chemistry, Northwest Teacher's University, Lanzhou, 730070, Peop. Rep. China
 SOURCE: Huaxue Shijie (1997), 38(2), 82-84
 CODEN: HUAKAB; ISSN: 0367-6358
 PUBLISHER: Shanghaishi Huaxue Huagong Xuehui
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

AB Zinc aspartate and zinc glutamate were prepared by refluxing L-aspartic acid and L-glutamic acid with zinc oxide (ZnO) (mol ratio of amino acid/zinc oxide = 1.25/1) in H₂O at pH 7 for 5-6 h, resp. Their structure were determined by IR spectra and element anal. The title compds are good zinc-supplying drugs.

IT 15322-33-5P, Zinc glutamate (1:1)
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and properties of amino acid zinc salt)

RN 15322-33-5 CAPLUS

CN Zinc, [L-glutamato(2-)-κN,κO1,κO5]- (9CI) (CA INDEX NAME)



L6 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:994221 CAPLUS
 DOCUMENT NUMBER: 124:56710
 TITLE: Zinc-free extraction of glutamic acid
 INVENTOR(S): Sun, Yunju
 PATENT ASSIGNEE(S): Peop. Rep. China
 SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 5 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1098088	A	19950201	CN 1993-111392	19930727 <--
			CN 1993-111392	19930727

PRIORITY APPLN. INFO.:

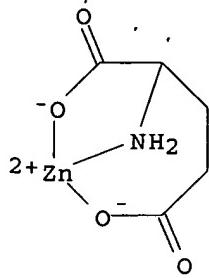
AB Glutamic acid (I) is extracted from a supernatant solution or mother liquor by precipitation of I as I.Zn salt, separation of the upper phase and subject it to cation exchange, and recovery of the Zn ion from the cation-exchange resins. ZnSO₄ was added to I mother liquor, NH₃ was introduced to pH 6.3-6.5, the precipitated I.Zn was separated from the upper phase, which was passed through a cation-exchange resin and the liquid was discharged Zn-free and harmless to the environment. The precipitated I.Zn was dissolved in H₂O and acidified to pH 2.4 to recover crystalline I. The Zn-adsorbed resins were eluted with 8-12% H₂SO₄ to recover Zn²⁺ for recycle.

IT 15322-33-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (Zinc-free extraction of glutamic acid)

RN 15322-33-5 CAPLUS

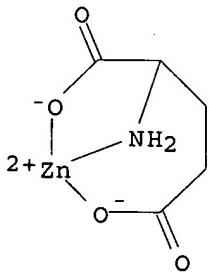
CN Zinc, [L-glutamato(2-)-κN,κO1,κO5]- (9CI) (CA INDEX NAME)



L6 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1989:522751 CAPLUS
 DOCUMENT NUMBER: 111:122751
 TITLE: Bath for electrodeposition of a gold-copper-zinc alloy
 INVENTOR(S): Emmenegger, Heinz
 PATENT ASSIGNEE(S): Engelhard Industries Ltd., UK
 SOURCE: Eur. Pat. Appl., 9 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 304315	A1	19890222	EP 1988-307696	19880819 <--
EP 304315	B1	19930303		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 86313	E	19930315	AT 1988-307696	19880819 <--
US 4980035	A	19901225	US 1989-382011	19890717 <--
CH 1987-3226 A 19870821				
US 1988-233704 B1 19880818				
EP 1988-307696 A 19880819				

PRIORITY APPLN. INFO.: MARPAT 111:122751
 OTHER SOURCE(S):
 AB The bath contains CN- complexes of Au, of Cu and of Zn, a surface-active agent and a soluble Te and/or Bi salt. It may also contain a non-cyanide organic Zn complex, and a conductive salt and/or an alkali metal or ammonium cyanide. Deposits formed from the bath are corrosion resistant.
 IT 15322-33-5
 RL: PRP (Properties)
 (electrodeposition of gold-copper-zinc alloys from baths containing)
 RN 15322-33-5 CAPLUS
 CN Zinc, [L-glutamato(2-) -κN, κO1, κO5]- (9CI) (CA INDEX NAME)



L6 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1989:476382 CAPLUS
 DOCUMENT NUMBER: 111:76382
 TITLE: Method for the determination of IgM and IgA immunoglobulins using zinc salts
 INVENTOR(S): Ben-Michael, Abraham
 PATENT ASSIGNEE(S): Savyon Diagnostics Ltd., Israel

SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 261493	A2	19880330	EP 1987-113092	19870908 <--
EP 261493	A3	19890823		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
JP 63133064	A2	19880604	JP 1987-225143	19870908 <--
NO 8703767	A	19880324	NO 1987-3767	19870909 <--
FI 8704080	A	19880324	FI 1987-4080	19870918 <--
DK 8704947	A	19880324	DK 1987-4947	19870921 <--
PRIORITY APPLN. INFO.:			IL 1986-80129	A 19860923

AB A method for the determination of IgM and IgA antibodies in blood serum involves removing the IgG and rheumatoid factor (RF) by precipitation with Zn²⁺, separating the liquid from the precipitate, and testing the liquid for IgM and IgA antibodies by immunoassay. Zn diglycinate (I) was prepared by treating ZnO with glycine, and adding Zn(OAc)₂. Human serum was tested by the immunoperoxidase assay (IPA) for the presence of antibodies to Chlamydia trachomatis; the IgG titer was 1:512 and no IgM was detected. The sample was diluted 1:10 with Tris to give 200 µL solution, an equal volume of 0.5 M I was added, and the sample was vortexed, and stored at 4° for 1 h. The sample was centrifuged and the liquid was subjected to the IPA. No IgG was detected, whereas the IgM titer was 1:128 and the IgA titer was 1:64. About 20% of the IgM and 15% of the IgA originally present in the sample were removed by the I treatment. When the same test was repeated using protein A as the precipitation reagent, the IgM titer was 1:128 and the IgA titer was 1:16.

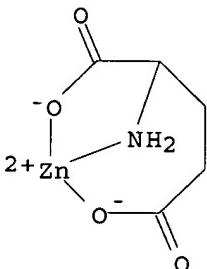
IT 15322-33-5

RL: BIOL (Biological study)

(precipitation by, of IgG antibody and rheumatoid factor, for determination of IgM and IgA antibodies in blood serum)

RN 15322-33-5 CAPLUS

CN Zinc, [L-glutamato(2-) -κN, κO1, κO5] - (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:181241 CAPLUS

DOCUMENT NUMBER: 104:181241

TITLE: Computer simulation models for the

low-molecular-weight complex distribution of

cadmium(II) and nickel(II) in human blood plasma

Cole, Alun; Furnival, Christopher; Huang, Z. X.;

Jones, D. Ceri; May, Peter M.; Smith, Gillian L.;

Whittaker, Jill; Williams, David R.

CORPORATE SOURCE: Inst. Sci. Technol., Univ. Wales, Cardiff, CF1 3XF, UK

SOURCE: Inorganica Chimica Acta (1985), 108(3),

165-71

CODEN: ICHAA3; ISSN: 0020-1693

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A computer simulation investigation into the nature of Cd(II) and Ni(II)

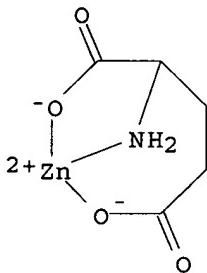
binding by low-mol.-weight ligands in human blood plasma is described. The distribution of these metal ions among the complexes formed with nearly 50 ligands was computed. The most important formation consts. required for the calcns. were determined exptl. under biol. conditions. The predominant complexes formed by Cd(II) are binary cysteinate species, whereas Ni(II) exists mainly as a ternary complex involving both cysteinate and histidinate.

IT 15322-33-5

RL: FORM (Formation, nonpreparative)
(formation of, in human blood plasma, computer simulation models for)

RN 15322-33-5 CAPLUS

CN Zinc, [L-glutamato(2-) - κ N, κ O1, κ O5] - (9CI) (CA INDEX
NAME)



L6 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1983:67492 CAPLUS

DOCUMENT NUMBER: 98:67492

TITLE: Histamine as a ligand in blood plasma. Part 6.

Aspartate and glutamate as possible partner ligands
for zinc and histamine to favor histamine catabolism

Berthon, Guy; Germonneau, Philippe

CORPORATE SOURCE: Lab. Chim. Electrochim. Interact., Poitiers, F-86022,
Fr.

SOURCE: Agents and Actions (1982), 12(5-6), 619-29
CODEN: AGACBH; ISSN: 0065-4299

DOCUMENT TYPE: Journal

LANGUAGE: English

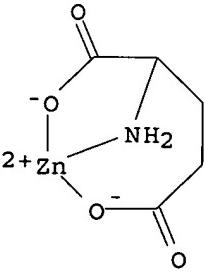
AB It has been proposed that any partner ligand for Zn and histamine (I) in which raising its plasma concentration would entail a better mobilization of I into neutral diffusible metal complexes would favor I catabolism. Such a role was envisaged for aspartate and glutamate, and their efficiency in this respect was tested by computer simulations, using the equilibrium consts. of the corresponding Zn-I-aspartate and Zn-I-glutamate complexes determined under standard plasma conditions. Aspartate and glutamate plasma concns. would have to be raised 1000- and 400-fold over their resp. normal levels before the combination of each of these amino acids with Zn would become more efficient than the effect of Zn alone.

IT 15322-33-5

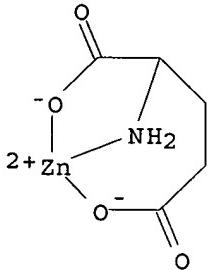
RL: PRP (Properties)
(formation constant of)

RN 15322-33-5 CAPLUS

CN Zinc, [L-glutamato(2-) - κ N, κ O1, κ O5] - (9CI) (CA INDEX
NAME)



L6 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1971:83161 CAPLUS
 DOCUMENT NUMBER: 74:83161
 TITLE: Computed distribution of copper(II) and zinc(II) ions among seventeen amino acids present in human blood plasma
 AUTHOR(S): Hallman, P. S.; Perrin, Douglas D.; Watt, Ann E.
 CORPORATE SOURCE: John Curtin Sch. Med. Res., Aust. Natl. Univ., Canberra, Australia
 SOURCE: Biochemical Journal (1971), 121(3), 549-55
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The equilibrium distribution of Cu(II) and Zn(II) ions among a mixture of 17 amino acids was computed from stability-constant and blood-plasma-composition data. At pH 7.4, 98 of the Cu(II) in the simulated plasma solution is coordinated to histidine and cystine, predominantly as mixed-ligand complexes. Approx. half of the Zn(II) is coordinated to cysteine and histidine, but appreciable complex-formation occurs with most of the other amino acids. Stability consts. are given for Cu(II) and Zn(II) amino acid complexes, including some mixed-ligand species, at 37° and I = 0.15M.
 IT 15322-33-5, Zinc, (L-glutamato)-
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
 (of blood plasma)
 RN 15322-33-5 CAPLUS
 CN Zinc, [L-glutamato(2-)-κN,κO1,κO5]- (9CI) (CA INDEX NAME)



L6 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1970:459668 CAPLUS
 DOCUMENT NUMBER: 73:59668
 TITLE: Solubility and properties of equilibrium solutions in the sodium L-glutamate-zinc chloride-water system
 AUTHOR(S): Potemko, L. I.; Bakasova, Z. B.; Druzhinin, I. G.
 CORPORATE SOURCE: Inst. Org. Khim., Frunze, USSR
 SOURCE: Izvestiya Akademii Nauk Kirgizskoi SSR (1969), (5), 56-61
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB In the above system, the formation of two new compds., Zn di-Na diglutamate and Zn glutamate, was ascertained. The compds. were isolated, and their phys. properties (d., n, solubility, dissociation constant, ir spectra, and x-ray patterns) were measured.
 IT 15322-33-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 15322-33-5 CAPLUS
 CN Zinc, [L-glutamato(2-)-κN,κO1,κO5]- (9CI) (CA INDEX NAME)